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U.S. Patent Application No. 10/087,987 Attorney Ref. No.: 082137-0280712

PRELIMINARY AMENDMENT OF THE CLAIMS

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Please enter the following amendment prior to substantive examination. This listing of claims will replace all prior versions, and listings, of claims in the application.

1-33. (Canceled)

- A method of treating a pre-malignant lesion or a malignant cancer in 34. (New) a subject, wherein the pre-malignant lesion or malignant cancer is characterized by the presence of activated matriptase, the method comprising:
 - obtaining a biological sample from a subject; (a)
- exposing the biological sample to a detectable agent that recognizes and binds (b) to activated matriptase;
- detecting activated matriptase that is bound to the detectable agent in the biological sample; and
- administering to the subject an agent that blocks the activity of active (d) matriptase.
- The method of claim 34, wherein the matriptase that characterizes 35. (New) the pre-malignant lesion or malignant cancer is produced by cells of an epithelial tissue.
- The method of claim 34, wherein the pre-malignant lesion or 36. (New) malignant cancer is present in a breast of the subject.
- The method of claim 34, wherein the pre-malignant lesion is 37. (New) atypical ductal hyperplasia of the breast and involves tissue remodeling.
 - 38. (New) The method of claim 34, wherein the detectable agent is an antibody.
- The method of claim 38, wherein the antibody binds specifically to 39. (New) activated matriptase but not to inactive matriptase.
- The method of claim 39, wherein the antibody binds specifically to 40. (New) an activated two-chain form of matriptase, but not to inactive, single-chain matriptase.
- The method of claim 40, wherein the antibody is selected from M69 41. (New) and M123.
- The method of claim 38, wherein the antibody is labeled with a 42 (New) detectable label.

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The method of claim 42, wherein the antibody is labeled with a 43. (New) radioisotope or a fluorescent label.

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- 44. (New) The method of claim 43, wherein the antibody is labeled with a radioisotope selected from the group consisting of 62Cu, 99Te, 131I, 123I, 111In, 90Y, 188Re, and 186Re.
- The method of claim 34, further comprising exposing the biological 45. (New) sample to one or more antibodies that recognize inactive, single-chain matriptase, and determining the ratio of the amount of activated matriptase that is specifically bound by antibodies to the total amount of matriptase that is specifically bound by antibodies.
- The method of claim 45, wherein the antibody that recognizes 46. (New) inactive, single-chain matriptase is M32.
- The method of claim 34, further comprising detecting the presence 47. (New) and or measuring the concentration in the biological sample of matriptase cognate inhibitor HAI-1.
- The method of claim 34, wherein the biological sample is obtained 48. (New) by biopsy, nipple aspirate, or removal of body fluid that has come into contact with cells of a pre-malignant lesion or a malignant cancer of the subject.
- The method of claim 34, wherein the agent that blocks the activity of active matriptase binds specifically to and directly blocks the activity of activated matriptase.
- The method of claim 49, wherein the agent that blocks the activity 50. (New) of active matriptase is an antibody.